

California Environmental Protection Agency Air Resources Board	DEUTZ AG	EXECUTIVE ORDER U-R-013-0420 New Off-Road Compression-Ignition Engines
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Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2012	CDZXL15.9001	11.9, 15.9	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Common Rail Direct Injection, Turbocharger, Charge Air Cooler, Electronic Control Module, Smoke Puff Limiter, Selective Catalytic Reduction-Urea			Compressor and Other Industrial Equipment	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

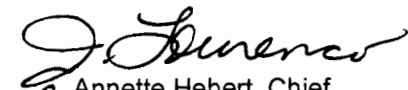
RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
130 ≤ kW ≤ 560	Interim Tier 4/ ALT NO _x	STD	0.19	2.0	N/A	3.5	0.02	N/A	N/A	N/A
		CERT	0.02	1.6	--	1.0	0.02	--	--	--

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 14th day of November 2012.


Annette Hebert, Chief
Mobile Source Operations Division

Deutz AG

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Engine Model Summary Template

Attachment page 1 of 2

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11/1/2012

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@pe ak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
CDZXL15.9001	C4SI520	TCD16.0V8	697.3@2100	275	256.6	2890@1400	300	186.6	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI520A	TCD16.0V8	697.3@2000	277	246.2	2890@1400	300	186.6	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI520B	TCD16.0V8	697.3@1900	286	241.5	2890@1400	300	186.6	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI505	TCD16.0V8	677.2@1800	294	235.1	2890@1400	300	186.6	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI480	TCD16.0V8	643.7@2100	250	233.3	14002800@	293	182.3	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI480A	TCD16.0V8	643.7@2000	255	226.6	2800@1400	293	182.3	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI480B	TCD16.0V8	643.7@1900	265	223.7	2800@1400	293	182.3	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI480C	TCD16.0V8	643.7@1800	278	222.3	2800@1400	293	182.3	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI440	TCD16.0V8	590.0@2100	230.8	215.4	2650@1400	278	172.9	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI440A	TCD16.0V8	590.0@2000	236	209.7	2650@1400	278	172.9	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI440B	TCD16.0V8	590.0@1900	242	204.3	2650@1400	278	172.9	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI440C	TCD16.0V8	590.0@1800	252	201.5	2650@1400	278	172.9	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI400	TCD16.0V8	536.4@2100	210	195.9	2650@1400	278	172.9	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI400A	TCD16.0V8	536.4@2000	215	191.1	2650@1400	278	172.9	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI400B	TCD16.0V8	536.4@1900	222	187.4	2650@1400	278	172.9	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI400C	TCD16.0V8	536.4@1800	225	179.9	2650@1400	278	172.9	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI350	TCD16.0V8	469.4@2100	182	169.8	2150@1400	226	140.6	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI350A	TCD16.0V8	469.4@2000	190	168.8	2150@1400	226	140.6	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI350B	TCD16.0V8	469.4@1900	192	162.1	2150@1400	226	140.6	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI350C	TCD16.0V8	469.4@1800	197	157.5	2150@1400	226	140.6	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI370	TCD16.0V8	496.2@2100	192	179.1	1900@1400	210	130.6	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI520X	TCD16.0V8	697.3@2100	274.8	256.5	2930@1400	309	192.3	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI390	TCD12.0V6	523.0@2100	281	196.6	2130@1300	303	131.2	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI390A	TCD12.0V6	523.0@2000	285	189.9	2130@1300	303	131.2	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI390B	TCD12.0V6	523.0@1900	300	189.9	2130@1300	303	131.2	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI370	TCD12.0V6	496.2@1800	295	176.9	2130@1300	303	131.2	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI360	TCD12.0V6	482.8@2100	255	178.4	2080@1300	295	127.8	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI360A	TCD12.0V6	482.8@2000	260	173.3	2080@1300	295	127.8	DDI, TC, CAC, ECM, SPL, SCR

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Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@pe ak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
CDZXL15.9001	C4SI360B	TCD12.0V6	482.8@1900	270	170.9	2080@1300	295	127.8	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI350	TCD12.0V6	469.4@1800	272	163.1	2080@1300	295	127.8	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI330	TCD12.0V6	442.5@2100	235	164.4	2000@1300	280	121.3	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI330A	TCD12.0V6	442.5@2000	240	159.9	2000@1300	280	121.3	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI330B	TCD12.0V6	442.5@1900	245	155.1	2000@1300	280	121.3	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI330C	TCD12.0V6	442.5@1800	255	152.9	2000@1300	280	121.3	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI300	TCD12.0V6	402.3@2100	215	150.4	2000@1300	280	121.3	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI300A	TCD12.0V6	402.3@2000	220	146.6	2000@1300	280	121.3	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI300B	TCD12.0V6	402.3@1900	225	142.4	2000@1300	280	121.3	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI300C	TCD12.0V6	402.3@1800	230	137.9	2000@1300	280	121.3	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI273	TCD12.0V6	366.1@2100	200	139.9	1800@1300	255	110.4	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI273A	TCD12.0V6	366.1@2000	205	136.6	1800@1300	255	110.4	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI273B	TCD12.0V6	366.1@1900	210	132.9	1800@1300	255	110.4	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI273C	TCD12.0V6	366.1@1800	215	128.9	1800@1300	255	110.4	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI240	TCD12.0V6	321.8@2100	195	136.4	1500@1300	215	93.1	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI240A	TCD12.0V6	321.8@2000	180	119.9	1500@1300	215	93.1	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI240B	TCD12.0V6	321.8@1900	185	117.1	1500@1300	215	93.1	DDI, TC, CAC, ECM, SPL, SCR
CDZXL15.9001	C4SI240C	TCD12.0V6	321.8@1800	190	113.9	1500@1300	215	93.1	DDI, TC, CAC, ECM, SPL, SCR